What is claimed is:

1. An information input and output method;

wherein an optical reading apparatus reads a dot pattern which is formed on a medium and in which information dots are arranged being misaligned at predetermined intervals in a x direction or a y direction from a grid point on a virtual grid line provided at predetermined intervals in a xy direction;

the optically read dot pattern is deployed on an image memory;

how to misalign each information dot from the grid point into the x direction or the y direction is recognized by a bit map calculation on the image memory;

a value is given to each information dot corresponding to the misalignment;

a difference of the values among the adjacent information dots is calculated to be defined as the bit information; and

a dot pattern is used, which outputs a bit information group in a predetermined area as the coordinate information or the code information.

2. The information input and output method using a dot pattern according to Claim 1,

wherein the misalignment at predetermined intervals from each grid point in the x direction or the

y direction on the virtual grid line is alternately generated for every adjacent information dots.

3. The information input and output method using a dot pattern according to Claim 1,

having a corner dot arranged on a grid point for each of the predetermined number of grid areas; and registering the coordinate information or the code information in the area encircled by the corner dot as the predetermined area.

4. The information input and output method using a dot pattern according to Claim 3,

wherein a vector dot meaning the direction of the predetermined area is arranged outside of the area encircled by the corner dot or on the grid point in the area.

5. The information input and output method using a dot pattern according to Claims 1 to 4,

wherein a security table having a key parameter corresponding to each bit stored therein is provided in a storage apparatus with respect to the outputted bit information group, and a true value is calculated by calculating each bit information by the key parameter.

6. An information input and output method;

wherein an optical reading apparatus reads a dot pattern which is formed on a medium and in which information dots are arranged being alternately misaligned at predetermined intervals in a x direction or a y direction for each of the adjacent grid points on a virtual grid line provided at predetermined intervals in a xy direction;

the optically read dot pattern is deployed on an image memory;

the alternately arranged information dots are searched and the grid line in the x direction and the y direction is recognized on a bit map;

a coordinate of each grid point is recognized on the bit map;

how to misalign each information dot from the grid point into the x direction or the y direction is recognized by a bit map calculation;

a value defined in advance is given to each information dot corresponding to the misalignment;

a difference of the values among the adjacent information dots is calculated to be defined as the bit information;

a bit information group in a predetermined area is outputted;

a key parameter is read from a security table having the key parameter corresponding to each bit stored therein with respect to the bit information group, and

a true value group is calculated by calculating each bit information by the key parameter; and

a dot pattern outputting the code information corresponding to the true value group or the coordinate information group on the medium surface is used.

7. A dot pattern generating method;

wherein information dots are arranged being alternately misaligned at predetermined intervals in a x direction or a y direction for every adjacent grid points on a virtual grid line provided at predetermined intervals in a xy direction on a medium;

a bit information group is calculated by calculating a key parameter read from a security table with respect to a true value group;

an initial dot to be arranged on an initial grid line in the x direction or the y direction is decided by using an arbitrary random number;

the initial dot is arranged on the basis of a misalignment rule from the grid point set in advance;

the bit information value is added to the value meant by the initial dot to calculate a value of a dot to be arranged on a second grid line;

each dot is arranged on the second grid line on the basis of the misalignment rule from the grid point set in advance; and

arrangement of a dot on a grid line n is repeated

by rotation on the basis of a dot on a grid line n-1.